MONTHLY WEATHER REVIEW.

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INTRODUCTION.

This REVIEW contains a general summary of the meteorological conditions which prevailed over the United States during May, 1884, based upon the reports from the regular and voluntary observers of the Signal Service and from co-operating state weather services.

Descriptions of the storms which occurred over the north Atlantic ocean during the month are also given and their approximate paths shown on chart i.

The most noteworthy features of the month were the destructive frosts which occurred in the lake region, New England and the northern portion of the middle Atlantic states, from the 28th to 31st, during the prevalence of high area vii.; and the excessive precipitation in the western Gulf states and southern slope, which resulted in damaging freshets in those districts.

Of the atmospheric depressions occurring during May, that described under "areas of low barometer" as number i. was especially severe during its passage over the lakes and resulted in great damage to shipping interests.

The month was slightly warmer than the average on the Atlantic coast south of New England, in the eastern Gulf states, and over the northwestern portion of the United States; elsewhere the mean temperature was below the average, the departure being greatest in the southern slope.

In the preparation of this REVIEW the following data, received up to June 20th, 1884, have been used, viz.: the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and twenty-two Signal Service stations and fourteen Canadian stations, as telegraphed to this office; one hundred and fifty-nine monthly journals, and one hundred and fifty monthly means from the former, and fourteen monthly means from the latter; two hundred and sixty-six monthly registers from voluntary observers; forty-nine monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports, through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs, furnished by the publishers of "The New York Maritime Register;" monthly weather reports from the local weather services of Alabama, Georgia, Illinois, Louisiana, Ohio, and Tennessee, and of the Central Pacific railway company; trustworthy newspaper extracts; and special reports.

ATMOSPHERIC PRESSURE.

[*Expressed in inches and hundredths.*]

The distribution of mean atmospheric pressure for May, 1884, determined from the tri-daily telegraphic observations of the Signal Service, is shown by the isobarometric lines on chart ii.

The area of mean barometric minima for May occupies about the same position as that for the preceding month, viz.: the southern plateau, where a small area is enclosed by the isobar of 29.8, the isobar of 29.85 including nearly the entire district. The mean pressure for the month is greatest along the coast of southern California, and in the north Pacific coast region, and in the south Atlantic and east Gulf states, where the mean pressures exceed 30.0, the highest barometric means reported being 30.03 at Olympia, Washington Territory, and 30.02 at Cedar Keys, Florida, Atlanta and Augusta, Georgia.

The mean pressure for May compared with that for April is from .02 to .09 greater over the northern and middle plateau districts and north Pacific coast region; it is also greater in the Gulf states, Tennessee, the Ohio and Saint Lawrence valleys, and on the Atlantic coast, the increase being greatest in New England and Nova Scotia, where it varies from .10 to .15. A decrease occurs in the southern plateau, and over the northern part of the country from central Montana to Lake Huron, the deficiency being greatest from Lake Superior to eastern Montana, where it varies from .10 to .14.

DEPARTURES FROM THE NORMAL VALUES FOR THE MONTH.

Compared with the normal pressure for May an increase of from .05 to .07 is shown over the eastern Rocky mountain slope; an increase varying from .01 to .04 also occurs in the Missouri valley, southern California, and in the middle and southern plateau districts. In the north and middle Pacific coast regions, Minnesota, and in all districts east of the Mississippi river the mean pressure is below the normal, the deficiencies varying from .05 to .07 in the north Pacific coast region, and from .05 to .10 in the lake region and Atlantic coast districts.

BAROMETRIC RANGES.

The monthly barometric ranges were greatest in New England and the upper lake region, the largest being 1.04 at Eastport, Maine, .93 on the summit of Mount Washington, New Hampshire, and .90 at Grand Haven, Michigan and Portland, Maine; they were least in California, Arizona, and along the Gulf coast where they were generally less than .40, the smallest occurring at Los Angeles and San Diego, California, where they were .26 and .27 respectively.

BAROMETRIC RANGES.

The monthly barometric ranges were greatest in New England and the upper lake region, where they varied from .76 to 1.04, the greatest range occurring at Eastport, Maine; they were smallest in California and Arizona and along the Gulf coast, where they were from .26 to .48, the smallest being reported from Los Angeles, California.

In the several districts the ranges varied as follows:

New England.—From .76 at New Haven, Connecticut, to 1.04 at Eastport, Maine.

Middle Atlantic states.—From .59 at Lynchburg, Virginia, to .74 at Sandy Hook, New Jersey.

South Atlantic states.—From .43 at Atlanta, Georgia, to .61 at Kitty Hawk, North Carolina.

Florida peninsula.—From .32 at Key West to .38 at Cedar Keys.

East Gulf states.—From .33 at New Orleans, Louisiana, to .42 at Montgomery, Alabama.